

Test Report



Report No. A223036704410100105

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Company Name
Shown on Report SHENZHEN JDB TECH. CO. LTD.Address ROOM 1105-1108, NO.2 BUILDING, EST MALL BUSINESS CENTER,
NO.698 CHANGBANG ROAD, XIACHENG DISTRICT, 310004,
HANGZHOU, CHINA

The following sample(s) and sample information was/were submitted and identified by/on the behalf of the client

Sample Name 2layers PCB
Material pcb
Sample Received Date Jul. 24, 2023
Testing Period Jul. 24, 2023-Aug.2, 2023

Test Requested

| No. | Test Item |
|-----|---|
| 1 | Coefficient of Linear Thermal Expansion |

Test Result(s): Please see the following pages.Approved by Annie LangDate Aug. 18, 2023

Annie Lang
Approved Signatory
Centre Testing International Group Co., Ltd.

No. RDAAD41CF3
Hongwei Industrial Zone, Bao'an 70 District, Shenzhen, Guangdong, China



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Tested Sample(s)

| Sample No. | Sample Name | Material |
|-------------------|-------------|----------|
| A2230367044101001 | 2layers PCB | pcb |

Sample Photo(s)



A2230367044101001



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Test Item: Coefficient of Linear Thermal Expansion

1. Test Equipment

| Equipment Name | Model |
|----------------------------------|--------|
| Thermal Mechanical Analysis(TMA) | TMA450 |

2. Environmental Conditions

Temperature: 23.8℃; Humidity: 48% RH

3. Test Standard: IPC-TM-650 2.4.24C

4. Test Conditions

(1) Preconditioning: Sample is preconditioned by baking for 2h at 105℃, then cooled to room temperature in a desiccator.

(2) Test condition: Heat from 30℃ to 270℃ at a rate of 10℃/ min in N₂.

5. Test Result(s)

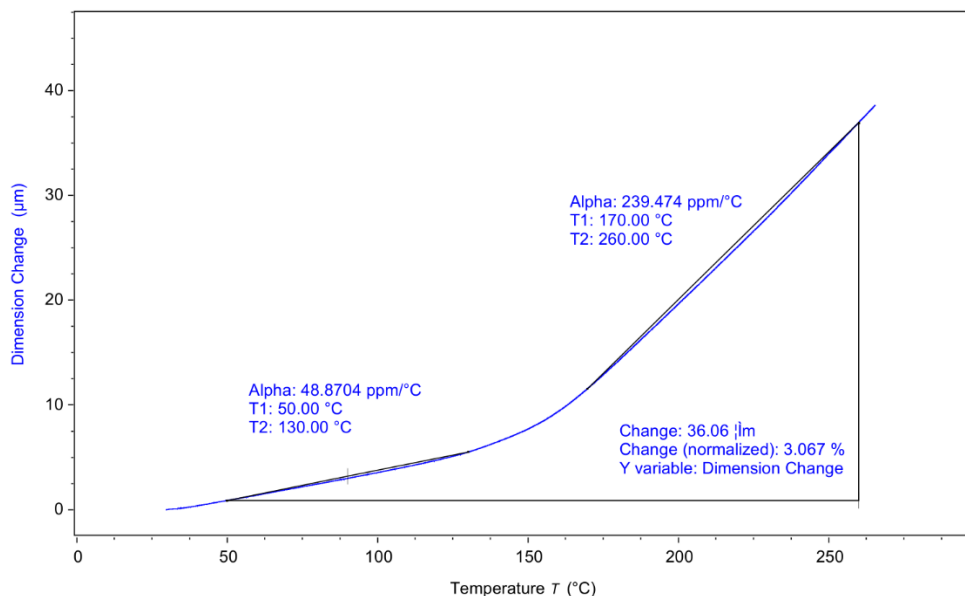
| Test Sample | Coefficient of Linear Thermal Expansion (ppm/℃) | | 50℃~260℃ Percentage of Thermal Expansion (%) |
|-------------------|---|---------|--|
| A2230367044101001 | <T _g | 48.8704 | 3.067 |
| | >T _g | 239.474 | |

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Test Curve:



Remark: The testing data and result(s) in this report is(are) just for scientific research, education, internal quality control and product development etc.

Statement:

- 1.This report is considered invalid without approved signature, special seal and the seal on the perforation;
- 2.Company Name and Address shown on Report, the sample(s) and sample Information was/were provided by the applicant who should be responsible for the authenticity which CTI hasn't verified;
- 3.The result(s) shown in this report refer(s) only to the sample(s) tested;
- 4.Without written approval of CTI, this report can't be reproduced except in full;
- 5.In case of any discrepancy between the English version and Chinese version of the testing reports(if generated), the Chinese version shall prevail.

*** End of Report ***